Land Use Sub-Process Workshops

Documentation in Support of Comprehensive Transportation Planning Process

June 4, August 2, and August 13, 2004

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Workshop Purpose:

To design and document a land use sub-process that is integrated with the comprehensive transportation planning process

Workshop Outcomes:

A land use sub-process is integrated with the comprehensive transportation planning process documented with input/outputs and roles/responsibilities

Workshop Participants:

June 4, 2004	Mike Bruff, Transportation Planning Branch - NCDOT Linda Dosse, Transportation Planning Branch - NCDOT Katherine English, Transportation Planning Branch - NCDOT Kimberly Hinton, Transportation Planning Branch - NCDOT Joe Huegy, Triangle Transit Authority Paul Kron, RTCC Chairman, Piedmont Triad Council of Governments John Morck, Division of Community Assistance - NC Department of Commerce Michael Orr, Transportation Planning Branch – NCDOT
August 2, 2004	Hanna Cockburn, Piedmont Triad Council of Governments/Piedmont Triad Rural Planning Organization Michael Orr, Transportation Planning Branch – NCDOT Paul Kron, RTCC Chairman, Piedmont Triad Council of Governments
August 13, 2004	Michael Orr, Transportation Planning Branch – NCDOT Kimberly Hinton, Transportation Planning Branch – NCDOT Paul Kron, RTCC Chairman, Piedmont Triad Council of Governments Hanna Cock burn, Piedmont Triad Council of Governments/Piedmont Triad Rural Planning Organization John Morck, Division of Community Assistance - NC Department of Commerce Linda Dosse, Transportation Planning Branch - NCDOT

Facilitators:

Janet D'Ignazio and Julie Hunkins

Documentation:

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Sub-Process Flow Item

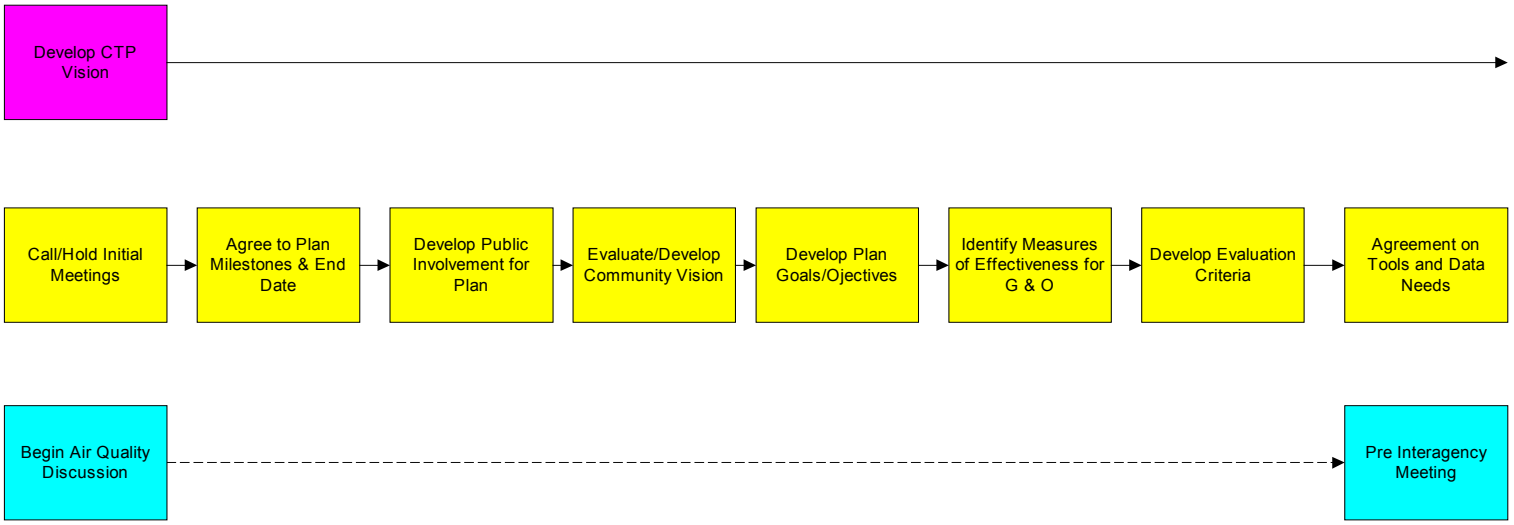
The flow item is an Asheville-type plan with air quality requirements, and has the following attributes:

- MPO area
- Air quality conformity
- Major plan update
- Comprehensive plan with financial constraints
- TPB serves in management role for plan update
- Technical support from TPB
- Local government(s) are capable and willing to collect land use data

Assumptions (for flow item)

- MPO Is clearly defined
- TPB is more of a “project manager” (does not imply management of MPO role)
- Model structure is still stable, but new base and future year data would be used
- Documentation of plan update will include CTP technical report and CTP/LRTP document/map
- Moderate number of comments on air quality conformity
- Land use tool for alternatives analysis
- Locals have an agreed-upon community vision
- Locals have community goals and objectives

Comprehensive Transportation Planning (CTP) Process Map



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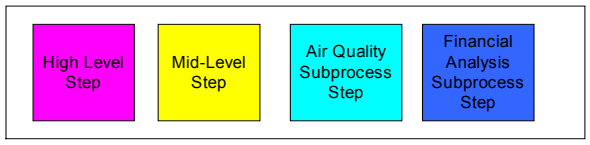
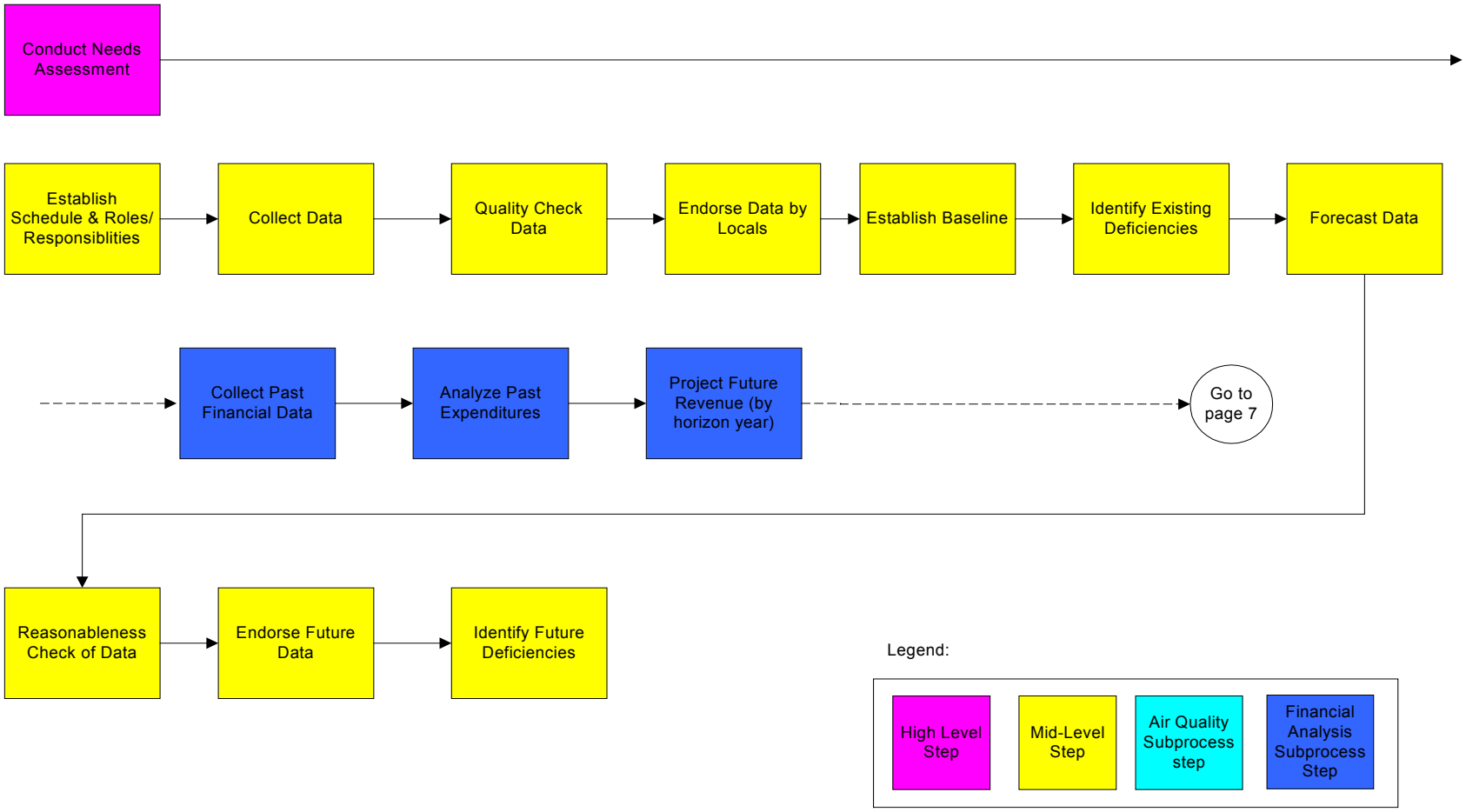
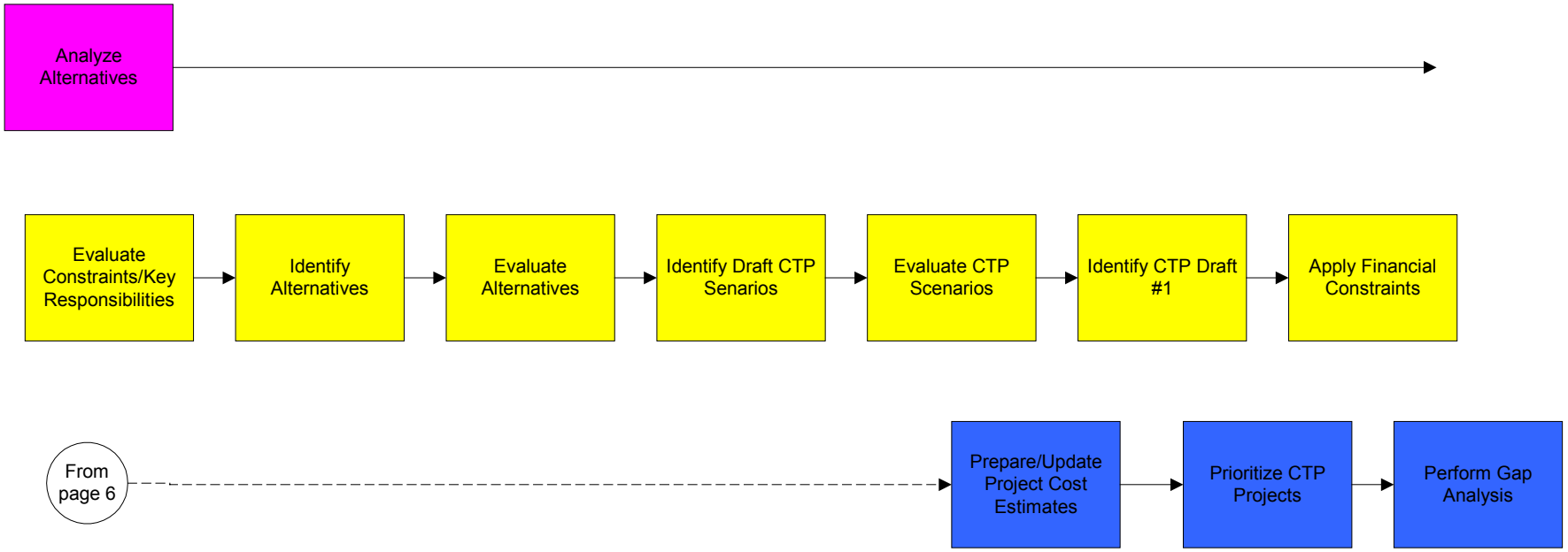


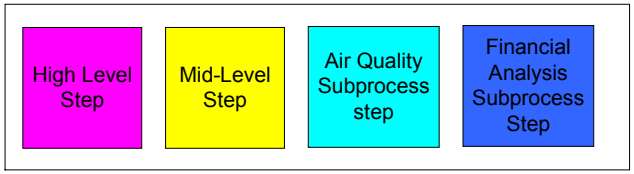
Comprehensive Transportation Planning (CTP) Process Map (cont.)



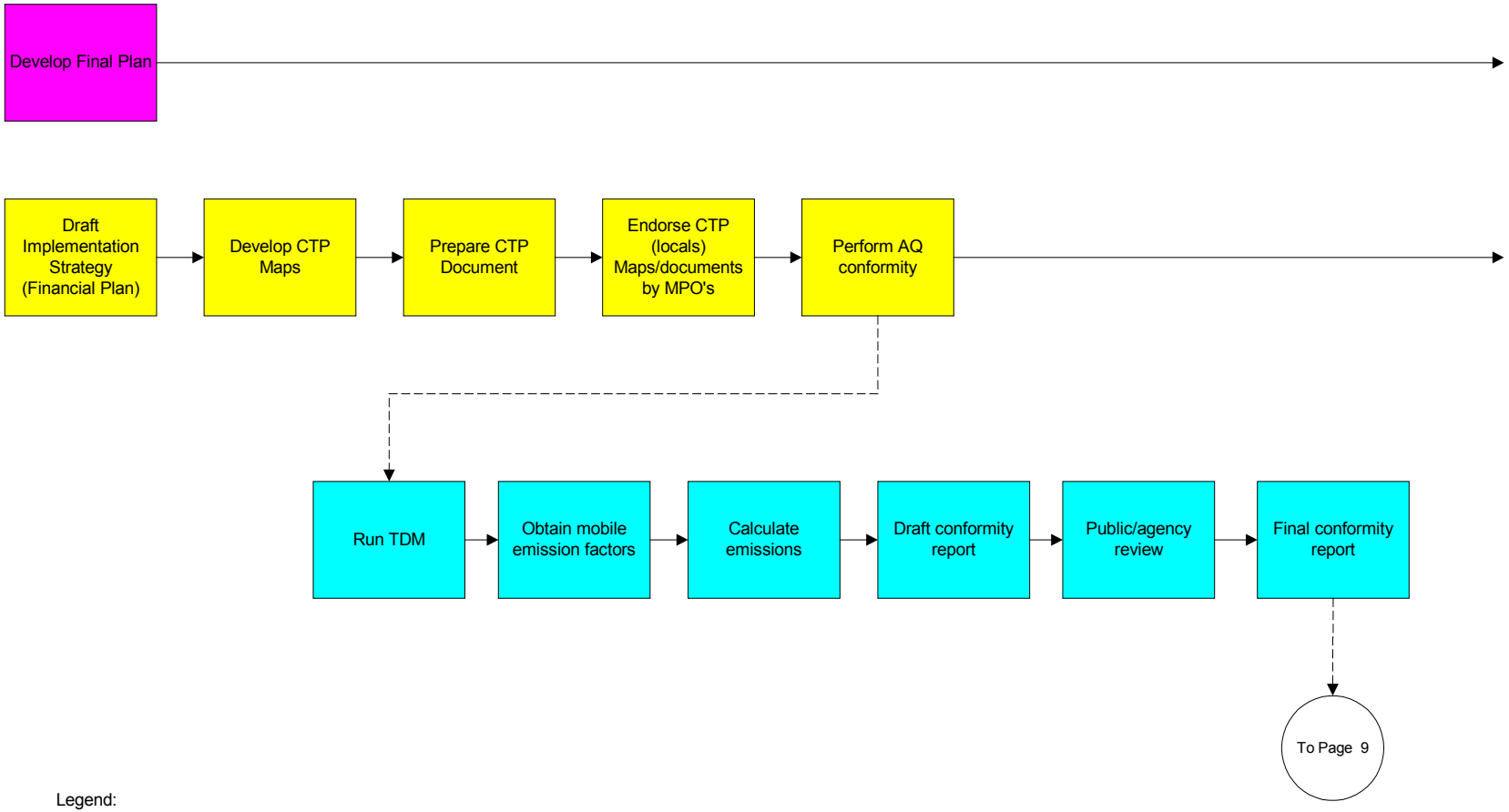
Comprehensive Transportation Planning (CTP) Process Map (cont.)


Analyze Alternatives
Evaluate Constraints/Key Responsibilities
Identify Alternatives
Evaluate Alternatives
Identify Draft CTP Senarios
Evaluate CTP Scenarios
Identify CTP Draft #1
Apply Financial Constraints
From page 6
Prepare/Update Project Cost Estimates
Prioritize CTP Projects
Perform Gap Analysis

Legend:


High Level Step
Mid-Level Step
Air Quality Subprocess step
Financial Analysis Subprocess Step

Comprehensive Transportation Planning (CTP) Process Map (cont.)



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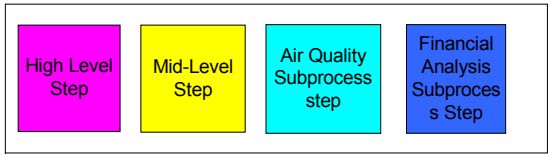
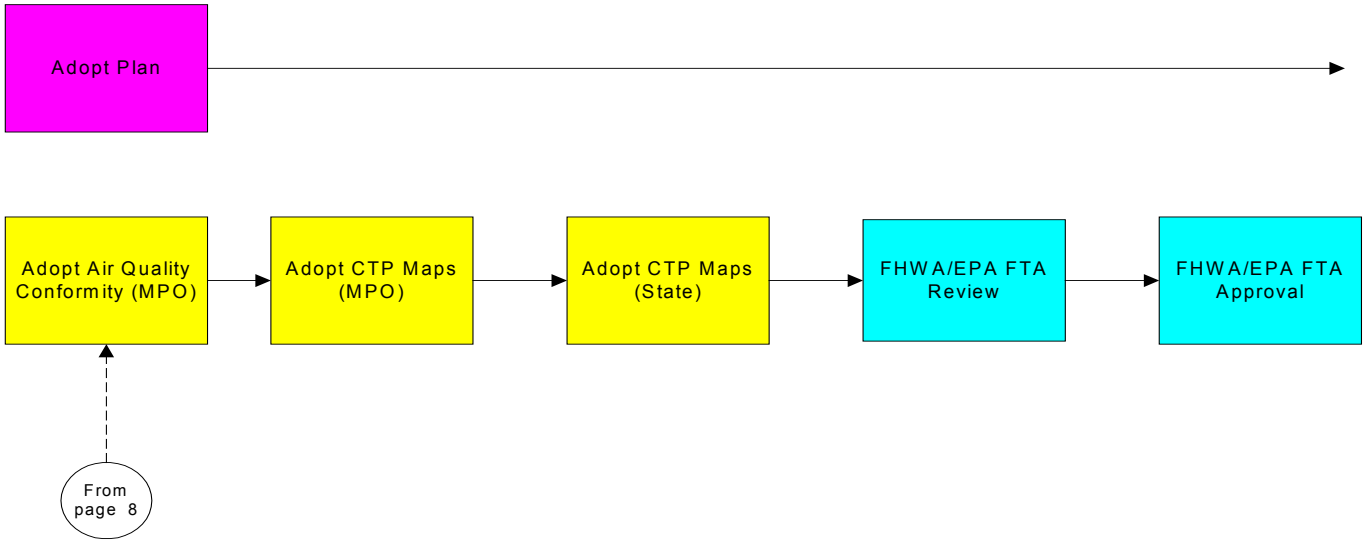


Comprehensive Transportation Planning (CTP) Process Map (cont.)



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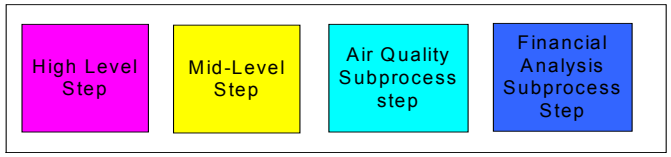


Land Use Issues Related to CTP Process Steps

The following issues were identified during the CTP Workshop and supplemented by other issues that were identified during the Land Use Sub-Process Workshops. Some CTP steps do not have related land use issues and, therefore, are not included in this section.

CTP 1a. Call/Hold Initial Meeting

Issues:

- At initial step, agree on number of alternative land use scenarios. One must be designated as current policy/practice based for AQ plan (or they change policies)
- Partner with other states agencies that have responsibility for land use planning (i.e., DCA, Coastal Management)
- Integrate context sensitivity into community vision/values
- Context sensitive focused plan
- Context sensitive design discussions as part of planning process
- Public involvement – use "work sessions" for small group generation of goals, alternatives, etc. include local staff, officials and public

Purpose:

- Make sure correct/complete land use partners present
- Existing status and quality of land use plan (environmentally friendly) -- level of confidence that it represents community vision
- Role in process for land use partners
- Environmental/human constraints DOT must meet (CSS and other)

Outcome:

- Consensus that land use plan meets quality standards
- Commitment to planning process (role, etc.)
- Mutual understanding expected benefits of process

CTP 1b. Agree to Plan Milestones and End Date

Purpose:

- Establish schedule and resources needed to meet land use tasks in CTP process

Outcome:

- Signed agreement with land use planning agencies they will commit to time and resources

Land Use Issues Related to CTP Process Steps (Cont.)

CTP 1d. Evaluate Develop Community Vision

Issues:

- Have all partners involved in vision development
- Use toolbox options to capture unique community needs

Purpose:

- Confirm, establish, or refine that community knows "what it wants to be when it grows up" (it has a community-aligned vision)

Outcome:

- A clear consensus for the community's vision

CTP 1e. Develop Plan Goals and Objectives

Issues:

- Better identification of community goals and objectives
- Improvement goal – NCDOT should help identify goals of local community through improved surveys

Purpose:

- Evaluate or establish land use goals and objectives that support integrated LU/ transportation planning process

Outcome:

- Goals and objectives to create integrated LU/ transportation plan

CTP 1h. Agreement on Tools & Data Needs

Purpose:

- Develop agreement on land use data source, analysis tools and who will supply/use

Outcome:

- Agreement on:
  - Data sources/consistency
  - Analysis tools
  - Responsibility for providing data
  - Long term partnership for providing data for on-going planning needs (project planning, corridor/sub-area)

CTP 2a. Establish Schedule and Roles and Responsibilities

Purpose:

- Establish detailed project plan with dates and responsibilities for land use

Outcome:

- Signed project plan from land use partners

Land Use Issues Related to CTP Process Steps (Cont.)

CTP 2b. Collect Data

Purpose:

- Collect necessary land use Data

Outcome:

- LU data to support integrated process

CTP 2c. Quality Check Data

Issues:

- Cite data sources
- Locals checking data earlier in the process

Purpose:

- To validate that land use data reasonably reflects conditions on the ground and is adequate to support an integrated transportation/LU process

Outcome:

- Valid land use data w/carefully defined data elements and documentation

CTP 2d. Endorse data by locals

Purpose:

- Consensus by MPO that data reflects existing conditions

Outcome:

- Consensus on existing conditions

CTP 2e. Establish Baseline

Issues:

- Develop land use tools
- Develop/implement specific strategies to integrate CTP/LRTP and land use plans (ie, map together)
- Use land planning principles in CTP (sensitive areas)
- Implement feedack between land use forecasts and model performance

Purpose:

- Describe existing land use conditions numerically

Outcome:

- Numerical description of existing land use conditions sufficient to support integrated land use transportation/process

Land Use Issues Related to CTP Process Steps (Cont.)

CTP 2g. Forecast Data

Issues:

- Use land use public involvement staff to ascertain plan projections and allocations
- Land use forecasts that consider redevelopment and multiple scenarios. Discuss options for land use integration: (2) multiple land use scenarios; (2) role of access management; and (3) others?
- Use land use planning staff to assist plan projections and allocations

Purpose:

- Estimated FY land use numerically

Outcome:

- Estimated FY land use that is consistent with adopted land use plan and sufficient to support integrated transportation land use process (ITLP)

CTP 2h. Reasonableness check of date

Issues:

- Establish validation measures for land use forecast
- Feedback in progress, assess and feedback consistency of infrastructure (water and sewer) land use, road and transit plans with road plan
- Check (zoning) and land use projections for consistency with land development plan
- Establish validation measures for land use forecast

Purpose:

- To validate that FY land use data reasonably reflects conditions on the ground and is adequate to support an integrated transportation/LU process

Outcome:

- Valid FY land use data w/carefully defined data elements and documentation

Land Use Issues Related to CTP Process Steps (Cont.)

CTP 3a. Evaluate constraints

Issues:

- Map environmental layers with transportation system – all modes

Purpose:

- Identify and evaluate flexibility for changing land use goals and policies that potentially constrain transportation solutions

Outcome:

- Consensus on land use constraints for potential transportation solutions

CTP 3b. Key Priorities

Purpose:

- Identification of priority land development projects or key public investments (i.e. water, sewer, gas, etc.)

Outcome:

- List of land uses that must be accommodated with transportation improvements

CTP 3c, Identify Alternatives

Issues:

- Present information showing local area, how land use plan affected transportation alternatives (during the process with possible feedback loops needed and in documentation before plan adoption. Specific feedback loop between transportation outcomes and land use forecasts with sensitivity analysis.
- Recommend land use/development pattern alternatives (not just transport projects) -- TDM/TSM

CTP 3d. Evaluate Alternatives

Issues:

- Check that the following matches the goals: land use project, land development plan, and problems and solutions identified (the adopted plan)

Purpose:

- To evaluate transportation alternatives (with underlying land use scenarios) against identified constraints (environmental, land use policy, etc.)

Outcome:

- Viable alternatives to carry forward

Land Use Issues Related to CTP Process Steps (Cont.)

CTP 4b. Develop CTP maps

Purpose:

- Develop land use map to match CTP plan

Outcome:

- Common understanding of the land use needed to support recommended transportation plan

CTP 4d. Endorse CTP

Issues:

- Tie LRTP to consensus community vision

Purpose:

- Acknowledgement of land use needed to support recommended transportation plan

Outcome:

- Acknowledgment of LU

Intentional Feedback Loops (LU 25 to LU 23 and LU 25 to LU 24) - Quality Check for Data

Purpose:

- Allow decision-makers the opportunity to understand the implication of LU/transportation interactions
- Make changes that allow community to balance transportation and land use goals

Outcome:

- Balanced integrated transportation and land use Plan

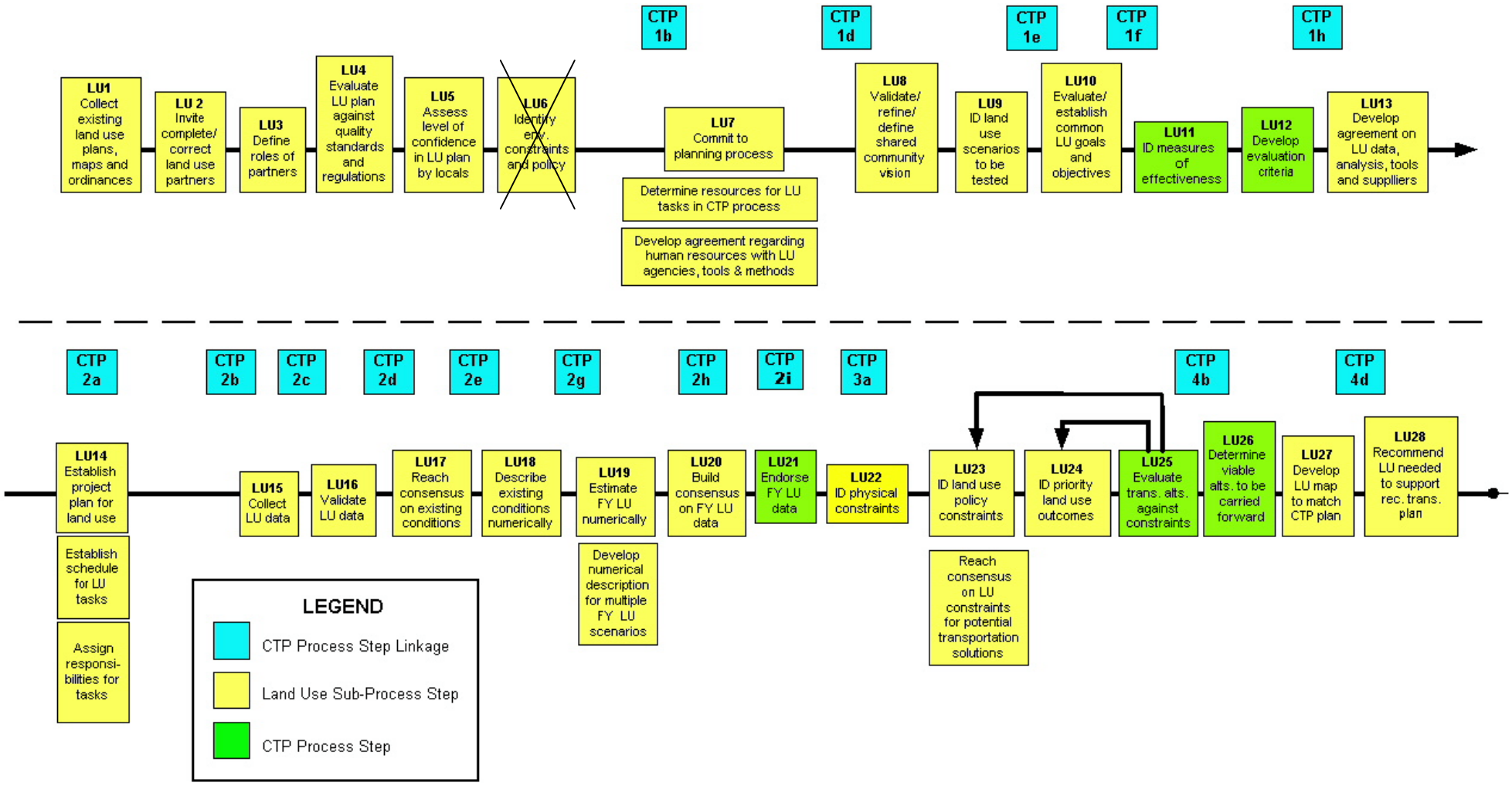
Land Use-Related Purpose and Outcomes from Comprehensive Transportation Planning Process

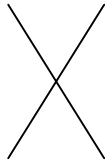
CTP Step	CTP Process Step Name	Land Use Purpose	Land Use Outcome
1a	Call/hold initial meetings	▪ Make sure correct/complete land use partners present ▪ Existing status and quality of land use plan (environmentally friendly) --level of confidence that represents community vision ▪ Role in process for land use Partners ▪ Environmental/Human constraints DOT must meet (CSS and Other)	▪ Consensus that land use plan meets quality standards ▪ Commitment to planning process (role, etc…) ▪ Mutual understanding expected benefits of process
1b	Agree to plan milestones and end date	▪ Establish schedule and resources needed to meet land use tasks in CTP process	▪ Signed Agreement with land use planning agencies they will commit to time and resources
1c	Evaluate/Develop Community Vision	▪ Confirm, Establish, or refine that community knows "what it wants to be when it grows up" (it has a community-aligned vision)	▪ A clear consensus for the community's vision
1e	Develop plan goals/objectives	▪ Evaluate or establish land use G&O that support integrated LU/ Transportation Planning Process	▪ G & O to created integrated LU/ transportation plan
1f	Identify measures of effectiveness for goals and objectives	Completed as part of CTP Step 1f	
1g	Develop evaluation criteria	Completed as part of CTP Step 1g	
1h	Agreement on tools and data needs	▪ Develop agreement on land use data source, analysis tools and who will supply/use.	▪ Agreement on: ➢ Data sources/consistency ➢ Analysis tools ➢ Responsibility for providing data ➢ Long term partnership for providing data for on-going planning needs (project planning, corridor/sub-area)
2a	Establish schedule and roles/responsibilities	▪ Establish detailed project plan with dates and responsibilities for LU	▪ Signed project plan from land use partners
2b	Collect data	▪ Collect necessary land use data	▪ LU data to support integrated process

CTP Step	CTP Process Step Name	Land Use Purpose	Land Use Outcome
2c	Quality data check	▪ Validate that land use data reasonably reflects conditions on the ground and is adequate to support an integrated transportation/LU process	▪ Valid land use data w/carefully defined data elements and documentation
2d	Endorse data by locals	▪ Consensus by MPO that data reflects existing conditions	▪ Consensus on existing conditions
2e	Establish baseline	▪ Describe existing land use conditions numerically	▪ Numerical description of existing land use conditions sufficient to support integrated LU/transportation process
2g	Forecast data	▪ Estimated FY land use numerically	▪ Estimated FY land use that is consistent with adopted land use plan and sufficient to support integrated transportation land use process (ITLP)
2h	Reasonableness check of data	▪ Make P& O match current except note for FY	
3a	Evaluate Constraints/Key Responsibilities	▪ Identify and evaluate flexibility for changing land use goals and policies that potentially constrain transportation solutions ▪ Identification of priority land development projects or key public investments (i.e. H20, sewer, gas, etc.)	▪ Consensus on land use constraints for potential transportation solutions ▪ List of land uses that must be accommodated with transportation Improvements
3c	Evaluate alternatives	▪ To evaluate transportation alternatives. (with underlying land use scenarios) against identified constraints (environmental, financial, land use policy)	▪ Viable alternatives to carry forward
3b	Key priorities	▪ Identification of priority land development projects or key public investments (e.g., water, sewer, gas, etc.)	▪ List of land uses that must be accommodated with transportation improvements
4b	Develop CTP Maps	▪ Develop land use map to match CTP plan	▪ Common understanding of the land use needed to support recommended transportation plan
4d	Endorse CTP	▪ Acknowledgement of land use needed to support recommended transportation plan	▪ Acknowledgment of LU
	Feedback Loop 1	▪ Allow decision-makers opportunity to understand the implication of LU/Trans interactions ▪ Make changes that allow community to balance transportation and land use goals	▪ Balanced integrated transportation/LU Plan
	Methods of	▪ Identify MOE that verifies we have balanced	

	Effectiveness (MOE)		

Land Use Sub-Process Map





Definitions/Explanations Related to Land Use Sub-Process

- “Shared Community Vision” must be shared for the entire planning area and include a description of the desired future land use pattern(s) related to transportation in the planning area.
- Examples of “Quality Standards” include:
    - Land use plan includes the data that is useful in the transportation planning process (environmental constraints, demographics, sociological and economic data)
    - Realistic land pattern (environmentally sensitive)
    - Public involvement in land use planning
    - Policies, goals and vision
- Evaluation Summary includes
    - A comparison of local community visions
    - The commonality of local goals and objectives
    - The land use data availability screening and the gap analysis
    - The flexibility of the local areas to adjust land use plan(s)

Process Step Inputs/Outputs and Process Participant Roles and Responsibilities

Key
D = Decision-maker
I = Information Provider
A = Analyzer
O = Informed Observer

Process Step #	Process Step Description	Input(s)				Output(s)				
		Input Item(s)	Responsible Entity and Role			Output Item (s)	Responsible Entity (X)			
			NCDOT	MPO/RPO	Local		NCDOT	MPO/RPO	Local	CTP Team
LU1	Collect existing land use plans, maps, and ordinances	1. Plans 2. Maps 3. Ordinances		A	I	Status summary land use in planning area		X		
LU2	Invite complete/ correct land use partners	List of jurisdictions with land use authority	O	D		List of contacts to invite that will participate in CTP process		X		
LU3	Define roles of partners	1. Education on overall CTP process 2. Education of partners on role of land use in the overall CTP process 3. Education on local land use planning process(es)	O	D	D	1. Definition of vertical liaison role 2. Definition of horizontal partnership role (set clear expectations) 3. Definition of decision-maker roles				X
LU4	Evaluate land use plans against quality standards and regulation	1. Land Use Plans 2. Quality standards [1] 3. Criteria and Regulations 4. Data needed to assess standards, criteria, regulations	O	A	I	1. Evaluation summary (written) • Gap summary • Recommendation – how to proceed		X		
LU5	Assess level of confidence in land use plan by locals	1. Assessment questions 2. List of appropriate people to ask (staff/elected/appointed) 3. Minutes from planning, zoning, or policy board meetings	O	A	I					
~~**LU6**~~	~~Identify environmental constraints and policy~~	-				-				

Process Step #	Process Step Description	Input(s)				Output(s)				
		Input Item(s)	Responsible Entity and Role			Output Item (s)	Responsible Entity (X)			
			NCDOT	MPO/RPO	Local		NCDOT	MPO/RPO	Local	CTP Team
LU7	Commit to planning process, determine resources for land use tasks in CTp process and develop agreement regarding human resourcces with land use agencies tools and methodology	1. Team member availability 2. General availability needed by team members 3. Identification of process tools, etc. to fix gaps	O	D	D	Formal endorsement of local government /MPO of CTP process, general staff and other resources to support				X
LU8	Validate, define, redefine shared community vision	Evaluation Summary	O	D	D	Formal endorsement by each local jurisdiction on shared local community vision OR Agreement to fix gaps in community vision(s)				X
LU9	ID land use scenarios to be tested	1. Valid Community Vision(s) 2. Summary of range of proposed growth patterns and intensity from visions	D	D	D	Number and conceptual growth patterns and intensity to be tested				X
LU10	Evaluate or establish land use goals and objectives	Evaluation Summary (commonality of local goals and objectives)	O	D	D	Agreement on shared land use goals and objectives				X
LU11	Identify measures of effectiveness[3]	See CTP 1f				-				
LU12	Develop evaluation criteria[3]	See CTP 1g				-				
LU13	Develop agreement on land use data, analysis tools, and suppliers	1. Evaluation summary (data availability screenings and gap analysis) 2. Required land use data standards to support CTP (methodology, level of detail, quality, etc.) 3. Summary table to identify common land use categories	O	D	D	For existing and proposed land use scenarios (for example, baseline, trendline, alternatives), must have agreement on: 1. common land use categories 2. who is providing what data 3. analysis tools 4. how to fill gaps identified in evaluation summary				X

Process Step #	Process Step Description	Input(s)				Output(s)				
		Input Item(s)	Responsible Entity and Role			Output Item(s)	Responsible Entity (X)			
			NCDOT	MPO/RPO	Local		NCDOT	MPO/RPO	Local	CTP Team
LU14	Establish project plan for LU Establish schedule for land use tasks Assign responsibilities for tasks	1. Agreements from LU13 outputs 2. Staff team (LU 7) 3. Other resource needs (LU7) 4. Minimum time required to complete tasks	O	D	D	Proposed project plan for land use (as input to CTP 2A)		X	X	
LU15	Collect land use data	1. Household & employment data by broad categories 2. Existing land use data by parcel (sub-parcel) 3. Vacant land overlaid on environmental constraints (TAZ structure)		A	I	LU data in maps & table summaries		X		
LU16	Validate land use data	Maps and summary tables			D	1. Review by individual planning jurisdictions 2. Recommendations on modifications by individual planning jurisdictions			X	
LU17	Reach consensus on existing conditions	Individual jurisdiction recommendations		D	D	Formal consensus on existing land use conditions by technical team		X		
LU18	Describe existing conditions numerically	1. Existing land use conditions 2. TAZ structure 3. SE data/whatever land use data is needed for trip generation	O	A		LU by TAZ (for model or other analysis tools)		X		
LU19	Estimated FY land use numerically Develop numerical description for multiple FY land use scenarios	1. Baseline land use data 2. Growth scenarios from LU9 3. TAZ structures 4. LU capacity data from LU15	O	A		FY land use by TAZ for each scenario		X		
LU20	Build consensus for FY land use data	Maps and summary tables for FY scenarios		D	D	Consensus on FY land use scenario's assignment to TAZ's		X		
LU21	Endorse FY land use data	*See CTP 2i				-				
~~**LU22**~~	~~Identify physical constraints~~	~~*See CTP 3a~~				-				

Process Step #	Process Step Description	Input(s)				Output(s)				
		Input Item(s)	Responsible Entity and Role			Output Item(s)	Responsible Entity (X)			
			NCDOT	MPO/RPO	Local		NCDOT	MPO/RPO	Local	CTP Team
LU25	Evaluate transportation alternatives against constraints	*See CTP 3d				-				
LU26	Determine viable alternatives to be carried forward	*See CTP 3e				-				
LU27	Develop land use map to match CTP Plan	1. CTP Draft #1 (from CTP 3g) 2. Numeric representation of land use data		A		Common map with transportation improvements on land use map		X		
LU28	Recommend land use needed to support recommended transportation plan	1. Common map from LU27 2. Background data to support land use changes		D		Recommended land use changes (policy, regulatory, pattern, intensity, etc.)		X		

Notes:

[1] Examples of "Quality Standards" include:

- Land use plan includes the data that is useful in the transportation planning process (environmental constraints, demographics, sociological and economic data)
- Realistic land pattern (environmentally)
- Public involvement in land use planning
- Policies, goals and vision

[2] LU9 involves interaction with the modeling process. This is an educational milestone where all CTP team members understand how land use and transportation planning interact.

[3] The following Land Use SubProcess steps are the same as the mainline CTP process:

- LU 11 (Identify Measures of Effectiveness) is CTP 1f (Identify Measures of Effectiveness for Goals and Objectives)
- LU12 (Develop Evaluation Criteria) is CTP1g (Develop Evaluation Criteria)
- LU 21 (Endorse FY land use Data) is CTP 2i (Endorse Future Data)
- LU 22 (Identify Physical Constraints) is CTP 3A (Evaluate Constraints)

Land Use Process Issues

LU 6 - Identify environmental constraints and policy

- This step is either part of LU 4 or LU 15. Land Use Team needs to discuss and decide.

LU 11 & 12 – Identify measures of effectiveness & develop evaluation criteria

- Are LU 11 and LU 12 actually part of the mainly CTP process?

LU 18 – Describe existing land use conditions numerically

- Feedback loop: after endorsement of data by locals, first model run will reveal problems with SE data

LU 21 – Endorse FY land use data

- Endorse future data – feedback loop

LU 23 – Assess flexibility for changing land use goals and policies; reach consensus on land use constraints for potential transportation solutions

- Feedback loop – identify future deficiencies
- Feedback loop – evaluate flexibility of land use policies constraining transportation solutions

LU 25 – Evaluate transportation alternatives against constraints

- Feedback loop – evaluate alternatives. Do land use allocations create problems or solve them?

Land Use Process Recommendations

For CTP Team:

1. DOT should participate and support education program on importance and benefit linking transportation and land use plans to agree with adopted the transportation plan.
2. Develop standards for adequate vision.
3. Pursue legislative changes that require land use planning in all counties and municipalities.
4. Make sure process improvement meetings make land use assumptions visible.
5. Recommend standards for land use planning.
6. Develop standards or definitions for priority land use and priority transportation projects.
7. For multi-modal, identify multi modal option at step for community vision and make sure there is a land use scenario to support as one of land use options.
8. Measures of effectiveness (CTP 1f) and develop evaluation criteria (CTP 1g) need to be defined by CTP and incorporated into land use sub-process as appropriate.
9. Develop consistent standards for GIS data.
10. Full partnership of land use agencies in the CTP process (signoff from all governments having a role in the planning process).

To Stakeholder Team:

- Make sure PI meetings etc. make land use assumptions visible

To Documentation Team:

- Provide all land use documentation as part of overall documentation process (maps, scenarios, goals, tests, etc.)

For Team Leaders and Project Managers

- Communication plan -- check for transportation jargon

Next Steps

1. Send Land Use team who is responsible for the products produced at each step (Janet and Julie).
2. Develop purpose and outcome statements for each step that the team has identified as needing public involvement. Send out to team for comment. (Julie and Team)
3. Send final documentation booklet to Land Use Team and send comments to Julie. (Julie and Team)
4. Regional MPO/RPO meetings to be held early Fall 2004 in Raleigh and Hickory (before MPO meeting in 3rd week in October). Team members are encouraged to attend.
5. CTP Team will meet late August or early September to review the work of the sub-process teams.
6. Decisions need to be made on the following issues:
   - If no community vision, do we commit to transportation planning process?
   - Should the Board of Transportation adopt the CTPO plan if the underlying plan use is not consistent with the CTP plan?
   - Does TAZ structure definition require existing land use data? (see LU 15)